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REMARKS

Claims 1-19 have been amended to more clearly define the invention.

Support for the amendments is found in the existing claims and in the Application description in connection with Figures 4 and 5 and other places.

I. Objection to specification.

The specification is objected to because the content of the Abstract exceeds 150 words in length and because page 12 of the Application contains embedded hyperlinks.

The Abstract has been amended to be less than 150 words in length and the specification is amended to remove the embedded hyperlinks. Consequently this ground of objection is no longer deemed to apply and its withdrawal is respectfully requested.

II. Rejection under 35 U.S.C. 102(b)

Claims 1-13 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 851 368 A2 – Nielsen et al. These claims, as amended, are deemed to be patentable for the reasons given below.

Amended claim 1 recites a system for “providing a user interface display image supporting user entry of an expression, comprising: a user interface menu generator for providing a displayable image including, a first image window listing a plurality of data items individually selectable from a plurality of different types of predetermined data items available for incorporation in an expression used for calculating a result value, an image prompt element for permitting user entry of said expression and for incorporating a data item in an entered expression from said listed data items to provide a resultant expression used for calculating a result value in response to user selection of said data item in said first image window, and an icon for initiating storing of said resultant expression; and an expression processor for processing said resultant expression to provide a calculated result value in response to user command”. These features are not shown (or suggested) in Nielsen.

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The system provides a "displayable image including, a first image window listing a plurality of data items individually selectable from a plurality of different types of predetermined data items available for incorporation in an expression used for calculating a result value". The system also provides "a resultant expression used for calculating a result value" in response to user selection of a "data item in said first image window" and processes the "resultant expression to provide a calculated result value in response to user command". These features enable "restriction and control of the data that is exposed to a user for entry in an expression and supports association of descriptive information with items of data exposed to users. In addition multiple user selectable template expressions are provided for user alteration advantageously facilitating the user interface process". The system also enables use of a "customizable expression" to "allow users to define formulas for calculating rates of reimbursement" in medical claim insurance reimbursement, for example (Application page 3 lines 32-35 and page 4 lines 23-27). This capability is of substantial advantage in hospital administration and improves hospital operation.

In contrast the system of Nielsen is "directed to a graphical user interface which permits the user to quickly learn search syntax by getting feedback on how the system interprets the search strings and operators selected by the user in a graphical user interface" (Nielsen page 2 lines 51-53). The Nielsen system does NOT show or suggest providing a "displayable image including, a first image window listing a plurality of data items individually selectable from a plurality of different types of predetermined data items available for incorporation in an expression used for calculating a result value". The Nielsen system is concerned with search and search expressions for obtaining search results and retrieving text and does NOT contemplate expressions for "calculating a result value", for example (Nielsen abstract).

Further, the Nielsen system does NOT show or suggest providing a "displayable image including, a first image window listing a plurality of data items individually selectable from a plurality of different types of predetermined data items available for incorporation" in a calculable expression. Thereby, a user is able to select from a "plurality of different types of predetermined data items available for incorporation" in a calculable expression. As shown in the application a user is able to select from "allowable values via window 725, miscellaneous values via window 724 and operators via window 726...for inclusion in the expression, for example" (Application page 11 lines 4-7 and Figure 5).

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In contrast, in Nielsen a user enters character strings in items 200 and field 270 (items relied on in the Rejection page 3). Further, "text entry fields 200" are "for receiving respective strings of characters for construction of a search" and "system interpretation field 270 represents a combination of the text fields and operators". Also, "pull down menu 260 represents a list of options for controlling the scope of the search. If the search is unrestricted, it is viewed as a search of the system library" that is menu 260 allows selection of sources to be searched. Further, menu 210 allows selection from a "plurality of operators", button 265 enables "activating the search" and "button 275 represents a pull down menu activation for causing a display of previously entered queries which have been submitted to the system" (Nielsen page 2 line 54 to page 3 line 27).

Consequently, items 200 are fields allowing user entry of search text, item 270 shows a created search expression, item 260 allows a user to select a source to be searched and item 265 is a search activation button. Therefore, items 200, 260, 265 and 270 are NOT "predetermined data items available for incorporation" in a calculable expression. Items 210 allow selection of logical search operators (AND, OR etc.) and are NOT (and do not suggest) "data items individually selectable from a plurality of different types of predetermined data items available for incorporation" in "an expression used for calculating a result value". The menu 210 operators are used to construct a logical search term to locate specific search results and NOT calculate a value. Similarly, item 275 enables location of previously "entered queries which have been submitted to the system" as searches and do NOT comprise expressions "used for calculating a result value". Consequently, Nielsen does not show or suggest a "displayable image including, a first image window listing a plurality of data items individually selectable from a plurality of different types of predetermined data items available for incorporation" in "an expression used for calculating a result value".

Further, the Nielsen system addresses the problems of difficulty of composing "string based search syntax" queries and the fact that "graphical user interfaces of the prior art do not permit a user to easily save, reuse or otherwise perform text processing on their queries or their previous queries" (Nielsen page 2 lines 39-47). In contrast, the claimed system enables "use of a "customizable expression" to "allow users to define formulas for calculating rates of reimbursement" in medical claim insurance reimbursement, for example" as well as "restriction and control of the data that is exposed to a user for entry in an expression and supports association of descriptive information with items of data exposed to users". (Application page 3 lines 32-35 and page 4 lines 23-27). Nielsen, does not address

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these problems and the problems involved in providing expressions for "calculating a value" such as an insurance reimbursement amount or contemplate the items or user interface needed to support such a calculation and provides no other reason or motivation for providing the claimed features. Consequently, withdrawal of the rejection of amended claim 1 under 35 USC 102(b) is respectfully requested.

Amended dependent claim 2 is considered to be patentable based on its dependence on claim 1. Claim 2 is also considered to be patentable because Nielsen does not show (or suggest) a system in which the "plurality of different types of predetermined data items comprise predetermined data items and associated predetermined allowable values for a corresponding predetermined data item and said data item is incorporated in said expression together with an operator comprising at least one of, (a) a logical operator and (b) an algebraic operator to provide said resultant expression". The Nielsen Figure 2 image items 200, 210 260, 265, 270 and 275 are NOT "predetermined allowable values for a corresponding predetermined data item" for incorporation in an expression (Nielsen page 2 line 54 to page 3 line 27). As previously explained, items 200, 260, 265 and 270 are NOT "predetermined data items" at all.

Further, available items 210 are logical search operators (AND, OR etc.) which are NOT data items since a "data item is incorporated in said expression together with an operator". That is an operator is used to link data items in an expression and is NOT a data item itself in the claim 2 arrangement and also does NOT comprise "predetermined allowable values for a corresponding predetermined data item". Similarly, item 275 enables location of previously "entered queries which have been submitted to the system" as searches and as such does not suggest generation of an image window permitting user selection of "predetermined allowable values for a corresponding predetermined data item".

Amended dependent claim 3 is considered to be patentable based on its dependence on claim 1. Claim 3 is also considered to be patentable because Nielsen does not show (or suggest) a system in which the "different types of predetermined data items comprise at least one of, (a) a patient identifier, (b) a medical condition identifier, (c) a patient address and (d) patient medical record information". These items are used in the "resultant expression" to calculate a "result value", such as an insurance reimbursement value for a specific patient and medical condition, for example. The Nielsen search expression based system does not contemplate providing a "calculated result value" using such data items at all.

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Amended dependent claim 4 is considered to be patentable based on its dependence on claim 1. Claim 4 is also considered to be patentable because Nielsen does not show (or suggest) a system involving the claim 4 combination of features in which the "predetermined data items are individually selectable by selection of displayed elements in a **hierarchical tree structure**, said displayed elements representing predetermined data items". Such a hierarchical tree structure is nowhere contemplated or suggested in Nielsen.

Amended dependent claim 5 is considered to be patentable based on its dependence on claim 1. Claim 5 is also considered to be patentable because Nielsen does not show (or suggest) the claim 5 feature combination involving an "expression processor" that "verifies an entered expression is valid and generates an indication as said result identifying said entered expression is invalid" and "initiates generation of a displayed notification to a user indicating said entered expression is invalid". Nielsen does not contemplate these features in combination with the features of claim 1.

Amended dependent claim 6 is considered to be patentable based on its dependence on claim 1.

Amended dependent claim 7 is considered to be patentable based on its dependence on claim 1. Claim 7 is also considered to be patentable because Nielsen does not show (or suggest) the feature combination involving an "expression processor" that "resolves said resultant expression to provide a result comprising a financial reimbursement sum determined per health care policy terms". As previously explained, Nielsen is concerned with search and search expressions for obtaining search results and retrieving text and does NOT suggest an "expression processor" that "resolves said resultant expression to provide a result comprising a **financial reimbursement sum determined per health care policy terms**". Nielsen does not contemplate expressions for "calculating a result value" at all (Nielsen abstract).

Amended dependent claim 8 is considered to be patentable based on its dependence on claim 1. Claim 8 is also considered to be patentable because Nielsen does not show (or suggest) a feature combination in which "said plurality of different types of predetermined data items include **miscellaneous values comprising predetermined specific words**".

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Amended dependent claim 9 is considered to be patentable based on its dependence on claim 1. Claim 9 is also considered to be patentable because Nielsen does not show (or suggest) a feature combination in which "said displayable image includes an image prompt element supporting user entry of a **name** for identifying a resultant expression and said user interface menu generator provides an image window permitting user selection of a template calculable expression from a plurality of predetermined template expressions". Contrary to the Rejection statement on page 4 Nielsen in Figure 5 does not show or suggest "entry of a **name** for identifying a resultant" calculable expression.

Amended dependent claim 10 is considered to be patentable based on its dependence on claim 1. Claim 10 is also considered to be patentable because Nielsen does not show (or suggest) a feature combination in which "said user interface menu generator provides an image window permitting user selection of a template **calculable expression** from a plurality of predetermined template calculable expressions and said image prompt element incorporates a selected template **calculable expression** in response to user selection of said selected template **calculable expression**". Nielsen does not contemplate expressions for "calculating a result value" at all (Nielsen abstract).

Amended dependent claim 11 is considered to be patentable based on its dependence on claim 1. Claim 11 is also considered to be patentable because Nielsen does not show (or suggest) a system in which a "said first image window lists a plurality of selectable data items in a **hierarchical tree type structure** and said plurality of selectable data items are associated with user accessible data item descriptions". Nielsen nowhere suggests use of an "image window" that "lists a plurality of selectable data items in a **hierarchical tree type structure**".

Amended dependent claim 12 is considered to be patentable based on its dependence on claim 1. Claim 12 is also considered to be patentable because Nielsen does not show (or suggest) a system in which "said icon for initiating storing of said resultant expression initiates allocation of a **version identifier** to said resultant expression". Nielsen nowhere suggests such features.

Amended dependent claim 13 is considered to be patentable based on its dependence on claims 1 and 12. Claim 13 is also considered to be patentable because Nielsen does not show (or suggest) a system in which "said expression processor uses

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said version identifier in processing a latest version of said resultant expression to provide said calculated result value". Nielsen nowhere suggests such features.

Amended independent claim 17 is considered to be patentable for reasons given in connection with claim 1.

Amended dependent claim 18 is considered to be patentable based on its dependence on claim 17. Claim 18 is also considered to be patentable because Nielsen does not show (or suggest) the feature combination of claim 18 in which "said expression processor processes said resultant expression to determine said resultant expression is valid and wherein said system for providing a user interface display image comprises machine executable code stored on a tangible storage medium".

Amended independent method claim 19 mirrors system claim 1 and is considered to be patentable for the same reasons.

III. Rejection under 35 U.S.C. 103(a)

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 851 368 A2 – Nielsen et al. These claims, as amended, are considered patentable for reasons given in connection with claims 1 and 2 and for the following reasons.

Amended independent claim 14 recites a system for providing a user interface display image" including "a user interface menu generator for providing a displayable image including, a first image window listing a plurality of selectable data items individually selectable from a plurality of different types of predetermined data items available for incorporation in an expression, said plurality of different types of predetermined data items comprise predetermined data items and associated predetermined allowable values for a corresponding predetermined data item, an image prompt element permitting user entry of said expression and for incorporating a data item in said expression from said listed data items to provide a resultant expression in response to user selection of said data item in said first image window, and an icon for initiating storing of said resultant expression; and an expression processor for resolving said resultant expression to provide a result in response to user command". These features are not shown or suggested in Nielsen.

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The arrangement of amended claim 14 provides "a first image window listing a plurality of selectable data items individually selectable from a plurality of different types of predetermined data items" that "comprise predetermined data items and associated predetermined allowable values for a corresponding predetermined data item". The arrangement incorporates "a data item in said expression from said listed data items to provide a resultant expression in response to user selection of said data item in said first image window". Nielsen does not suggest providing "a first image window listing a plurality of selectable data items individually selectable from a plurality of different types of predetermined data items" that "comprise predetermined data items and associated predetermined allowable values for a corresponding predetermined data item".

There is no suggestion in Nielsen in connection with Figure 2 or 3 or elsewhere of "listing a plurality of selectable data items individually selectable from a plurality of different types of predetermined data items" that "comprise predetermined data items and associated predetermined allowable values". This is because Nielsen is concerned with facilitating developing search syntax expressions (see Abstract) and such search expressions do NOT use search syntax data items having "associated predetermined allowable values". Therefore Nielsen fails to contemplate or suggest providing a display image listing "selectable data items individually selectable" from "predetermined data items and associated predetermined allowable values" for incorporation in an "expression". This system facilitates creation of a "customizable expression" to "allow users to define formulas for calculating rates of reimbursement" in medical claim insurance reimbursement, for example (Application page 3 lines 32-35 and page 4 lines 23-27). Nielsen is not concerned with expressions for calculating values and provides no other reason or motivation for incorporating the claimed features.

The Nielsen system addresses the problems of difficulty of composing "string based search syntax" queries and the fact that "graphical user interfaces of the prior art do not permit a user to easily save, reuse or otherwise perform text processing on their queries or their previous queries" (Nielsen page 2 lines 39-47). In contrast, the claimed system enables "use of a "customizable expression" to "allow users to define formulas for calculating rates of reimbursement" in medical claim insurance reimbursement, for example" as well as "restriction and control of the data that is exposed to a user for entry in an expression and supports association of descriptive information with items of data exposed to users". (Application page 3 lines 32-35 and page 4 lines 23-27). Nielsen, does not recognize the advantages of

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using "a first image window listing a plurality of selectable data items individually selectable from "predetermined data items and **associated predetermined allowable values**". Nielsen also fails to address the problems involved in providing expressions for determining an insurance reimbursement amount, for example, or contemplate the data items or user interface needed to support such determination and provides no other reason or motivation for providing the claimed features. Consequently withdrawal of the Rejection of amended claim 14 under 35 USC 103(a) is respectfully requested.

Amended dependent claim 15 is considered to be patentable based on its dependence on claim 14. Claim 15 is also considered to be patentable because Nielsen does not show (or suggest) "said expression comprises a calculable expression, and said expression processor processes said resultant expression to provide a calculated result value in response to said user command". As previously explained in connection with claims 1, 2 and 14, Nielsen nowhere suggest such a combination of features or provides any problem recognition or other motivation for incorporating such a combination of features.

Amended dependent claim 16 is considered to be patentable based on its dependence on claim 14. Claim 16 is also considered to be patentable because Nielsen does not show (or suggest) the feature combination of claim 16 in which "said plurality of different types of predetermined data items identify at least one of, (a) a patient, (b) a patient physical characteristic, (c) patient address information and (d) patient medical record information and said user interface menu generator provides an image window indicating said associated predetermined allowable values for a corresponding predetermined data item comprise at least one of, (i) an acceptable parameter and (ii) an acceptable value, associated with a data item selected by a user via said first image window". The Rejection on page 7 recognizes such features are not shown in Nielsen. However, the Rejection erroneously states that the "data items" that "identify at least one of, (a) a patient, (b) a patient physical characteristic, (c) patient address information and (d) patient medical record information" are non-functional. These items are by definition functional and used to "identify" entities that directly impact the "result" of "resolving said resultant expression" in "response to user command". Further, Nielsen nowhere suggests providing "an image window indicating said associated predetermined allowable values for a corresponding predetermined data item comprise at least one of, (i) an acceptable parameter and (ii) an acceptable value, associated with a data item selected by a user via said first image window". As previously explained, Nielsen

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does not contemplate an image window enabling user selection of such “predetermined allowable values” at all. Consequently withdrawal of the Rejection of amended claims 14-16 under 35 USC 103(a) is respectfully requested.

In view of the above amendments and remarks, Applicants submit that the Application is in condition for allowance, and favorable reconsideration is requested.

Respectfully submitted,



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